



# RELATED COUNTY ORDINANCES

## *Chapter Outline:*

### *Zoning Districts*

### *Stormwater Management*

### *Riparian buffers*

### *Flood Damage Prevention*

## **Local Land Development Codes**

Suggested changes to development codes in Johnston County, the Town of Clayton, and the Town of Smithfield include adding the following text regarding greenways in adopted plans:

*“In any case in which a greenway is indicated on an adopted plan of [Johnston County, the Town of Clayton, or the Town of Smithfield] as being located on lands proposed for development, such greenway shall be dedicated and developed.”*

Other local communities in North Carolina have included similar requirements in development ordinance sections on *lot design* and/or *public place reservation*.

## **The MST and Johnston County’s Land Development Code**

Suggested modifications to Johnston County’s Land Development Code include the changes noted above and those noted on page A-4. Selected Articles and Sections from Chapter 14 of Johnston County’s Land Development Code are provided below for reference.

### **Article II. Zoning Districts**

#### **Sec. 14-75. Agricultural-residential district (AR).**

(a) *Intent.* The agricultural-residential district (AR) is intended to encourage the continuance of agricultural uses as well as to ensure that residential development will occur at sufficient densities to provide for a range of housing opportunities throughout the county. Further, it is the intention of the regulations of this district to ensure that residential development having access and connecting to public water and sanitary sewer systems will occur within a healthful environment.

(f) *Provision of common open space or recreation area requirements.* All residential developments shall provide or dedicate common open space or recreation areas

## MOUNTAINS-TO-SEA TRAIL

suitable for the residents' common passive recreational use or make a payment in lieu of provision or dedication.

(g) *Minimum common open space or recreation area.* When common open space or recreational area must be provided or dedicated as part of a residential development, its total land area shall be at least ten percent of the total gross land area of the development, however total amount of open space provided can be no less than two acres in size. The required open space shall be contiguous, unless it is determined by the planning board that the required open space can be split and located at different places in a development. If a proposed development contains wetlands and/or riparian or stream buffer areas, or overhead electric utility easements, they must be designated as common open space. However, these areas will not count toward the amount of required open space. If it can be demonstrated by the developer that this requirement presents an unreasonable hardship and strictly limits the amount of lots they can develop, then the planning board can allow these areas to be included in residential lots so long as all other requirements of this section are met.

(h) *Method of provision or dedication.* Land provided or dedicated for common open space or recreation purposes shall be designated on a final plat duly recorded with the county register of deeds. Such common open space land may be dedicated or deeded to an appropriate public body upon their acceptance, land trust, nonprofit, or for profit organization established for the purpose of land conservation or recreational purposes; or create a neighborhood or homeowner's association for the continuing maintenance and control of common open space or recreation area; or, held by the owner subject to the recording of a permanent conservation easement or similar open space or recreational land dedication.

(i) *Payments in lieu of provision or dedication.* In lieu of providing or dedicating common open space or recreation area required pursuant to this section, a developer of a subdivision or planned development may choose to make a payment to the county whereby the county may acquire common open space land. The county shall use such payment only for the acquisition or development of open space, recreation, or park sites to serve residents of the county. The amount of the payment shall be the product of the total number of lots or dwelling units proposed multiplied by that fee established in the county's annual schedule of fees. The developer shall make the payment before approval of a final plat or issuance of a land use permit; provided, however, that the planning director may allow phasing of payments consistent with the approved phasing of the development.

(j) *Access to open space.* All open space must be pedestrian accessible. Open space not contiguous to a proposed subdivision street must have a minimum of a 20 foot fee-simple access.

(Ord. of 7-10-2000, § 4.4.1; Ord. of 11-13-2000, § 4.4.1; Ord. of 2-12-2001, §§ 4.4.1.3, 4.4.1.6.1; Ord. of 7-9-2001; Amend. of 5-12-2003(1); Amend. of 8-11-2003; Amend. of 2-9-2004; Amend. of 7-12-2004, §§ A), B); Amend. of 12-12-2005(1); Amend. of 5-1-2006(1))

**Sec. 14-103. Environmentally sensitive area district (ES).**

(a) *Purpose and intent.* The environmentally sensitive area district (ES) is established as a district that overlays areas deemed environmentally sensitive. Development within this overlay district shall comply with the regulations of the underlying zoning district, provisions of this section and any other applicable sections of this article.

(b) *Definitions:*

(1) *Intermittent stream.* A natural drainage way, which shows up as a blue line on the USGA 7.5 minute quadrangle maps and has a contributing drainage area of 300 acres or more shall be considered an intermittent stream for purposes of this ordinance.

(2) *Perennial stream.* Perennial streams are streams that have essentially continuous flows. Perennial streams in the environmentally sensitive area are specifically designated to be Swift Creek, White Oak Creek, Little Creek (from the U.S. 70 Clayton bypass to Swift Creek), and the Little River (from the county line to NC 39).

(c) *Delineation of.*

(1) *Perennial stream buffers.* Perennial stream buffers shall be measured from the top of the channel bank and extend landward a minimum distance of 100 feet measured horizontally on a line perpendicular to the water body, subject to the following conditions:

- a. The buffer shall be undisturbed and remain forested if currently forested.
- b. If the existing buffer is not forested, it shall be maintained in a natural state and allowed to revegetate.
- c. There shall be no fill allowed within the buffer area.

(2) *Intermittent stream buffers.* Intermittent stream buffers shall have two zones as described below:

- a. Zone 1 shall be an undisturbed area extending from the channel bank landward a minimum of 30 feet measured horizontally on a line perpendicular to the water body.
- b. Zone 2 shall be a vegetative buffer extending from the outer edge of zone 1 landward a minimum of 20 feet measured horizontally on a line perpendicular to zone 1.

(3) *Maintenance of buffers.* Zone 1 and zone 2 shall be maintained by the landowner or homeowners' association to maintain stormwater sheet flow to the maximum extent practical to provide for diffusion and infiltration of stormwater runoff and filtering of pollutants into the affected stream, consistent with maintenance criteria as set out in the county design manual.

(4) *Exemptions.* The following are exempt from the stream buffer requirements of this section:

- a. Areas that are mapped on the USGS quadrangle map that do not exist on the ground.
- b. Ponds and lakes created for animal watering, irrigation of farm lands, or other agricultural uses that are not part of a natural drainageway.
- c. Where application of the requirements of this section would prevent all prospective use of a lot platted and recorded prior to May 26, 1998.
- d. Water dependent structures that are designed, constructed, and maintained to provide the maximum nutrient removal, have the least adverse affects on aquatic habitats and that protect water quality.
- e. Roads, bridges, stormwater management facilities, ponds, and utilities where no other practical alternative exists. These structures shall be so located, designed, constructed, and maintained to have minimal disturbance, provide maximum nutrient removal, provide the least adverse effects on aquatic habitats and protect water quality to the maximum extent possible.
- f. Ditches and manmade conveyances other than modified natural streams.

(5) *Flood hazard areas.* There shall be no development allowed within the areas of special flood hazard as defined in the county flood damage prevention ordinance, which shall be defined as residential and nonresidential structures, including improvements or additions to such structures. However, specifically allowed improvements include public utility structures, buried utilities, roadways and accessways, and recreational facilities as long as no structures are involved.

(Ord. of 7-10-2000, § 4.5.2; Ord. of 11-13-2000, § 4.5.2.2; Amend. of 3-7-2005)

## **Article VII. Stormwater Management**

### **Sec. 14-381. Purpose.**

The purpose of this article is to establish minimum criteria to control and minimize quantitative and qualitative impacts of stormwater runoff from development within the county, a nutrient management program for new development in accordance with 15A NCAC 2B .0235 Neuse River Basin - Nutrient Sensitive Waters Management Strategy: Basinwide Stormwater Requirements and to establish regulations to provide additional protection within the environmentally sensitive area district (ES). Further, prudent site planning should include special consideration for the purposes of preserving natural drainageways, maximizing infiltration, and slowing stormwater runoff from individual sites en route to streams and rivers by use of effective runoff management, structural and nonstructural best management practices, drainage structures, and stormwater facilities.  
(Ord. of 7-10-2000, § 9.1; Ord. of 1-2-2001, § 9.1)

*The last sentence of Sec. 14-103 (5), states that recreational facilities are allowed “as long as no structures are involved.” The County should not define trails as ‘structures’ in this context. Trails do not impede the flow of water, and furthermore, they can be designed with pervious surfaces so as not to contribute to runoff. Finally, trails provide access to floodprone areas so that these lands can be better managed to reduce hazards and improve stormwater flow. For more environmental benefits of trails, please refer to Chapter 2.*

**Sec. 14-393. Riparian buffers.**

Fifty-foot wide riparian buffers shall be maintained along both sides of a stream, river or other waterbody as required by the Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Riparian Buffers, Section 3(a-b). Riparian buffers shall be noted on the maps submitted for stormwater management plan approval and shall be noted on the final recorded map. Determinations of exemptions (as noted in 15A NCAC 2B.0233 Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Riparian Buffers, Section 3(a-b)) shall be made by the NCDENR Division of Water Quality.

(Ord. of 7-10-2000, §§ 9.7, 9.8; Ord. of 1-2-2001, § 9.10)

*Riparian buffer* means an area of trees, shrubs, or other forest vegetation, that is adjacent to surface waters. For purposes of this article, surface water shall be present if the feature is approximately shown on either the most recent version of the county soil survey report prepared by the NRCS or the most recent version of the 1:24,000 scale (7.5 min.) quadrangle topographic maps prepared by the United States Geological Survey. Riparian buffers adjacent to surface waters that do not appear on either of the maps shall not be subject to this article, except as noted in section 14-103.

**Article VIII. Flood Damage Prevention****Sec. 14-421. Purpose.**

The flood hazard areas of the county are subject to periodic inundation which results in loss of life, property, health and safety hazards; disruption of commerce and governmental services; extraordinary public expenditures of flood protection and relief; and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. These flood losses are caused by the cumulative effect of obstructions in the floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

(Ord. of 7-10-2000, § 10.1; Ord. of 11-7-2005)

*Flood hazard boundary map (FHBM)* means the official map of the county, issued by the Federal Emergency Management Agency, where boundaries of the areas of special flood hazard have been defined as zone A.

*Flood insurance rate map (FIRM)* means the official map of the county, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the county.



*Floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

*Special flood hazard area (SFHA)* means the land in the floodplain subject to a one percent or greater chance of being flooded in any given year as determined in section 14-426.

### **Sec. 14-425. Lands to which this article applies.**

This article shall apply to all areas of special flood hazard within the jurisdiction of the county.

(Ord. of 7-10-2000, § 10.5.1)

### **Sec. 14-426. Basis for establishing the areas of special flood hazard.**

The areas of special flood hazard identified by the Federal Emergency Management Agency in its latest flood insurance study for the county, with accompanying maps and other supporting data, and any revision thereto are adopted by reference and are declared a part of this article and such areas demonstrated to constitute floodway and floodplain, supported by flood study by a qualified professional engineer and accepted by the county.

(Ord. of 7-10-2000, § 10.5.2)

### **Sec. 14-481. Construction standards.**

(a) In all areas of special flood hazard, the following provisions are required:

- (1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- (2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (3) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damages.
- (4) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

(6) New and replacement sanitary sewer systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the system[s] into floodwaters.

(7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

(8) Any alteration, repair, reconstruction, or improvements to a structure which is in compliance with the provisions of this article shall meet the requirements of new construction as contained in this article.

(9) Nonconforming buildings or uses may not be enlarged, replaced or rebuilt unless such enlargement or reconstruction is accomplished in conformance with the provisions of this article; however, nothing in this article shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of the ordinance from which this article derives and located totally or partially within the floodway zone, provided that the bulk of the building or structure below base flood elevation in the floodway zone is not increased and provided that such repair, reconstruction, or replacements meet all of the other requirements of this article.

(10) New solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted in special flood hazard areas, except by variance as specified in [subsection] 14-456(h). A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a special flood hazard area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified according to section 14-455.

(11) No more than 20 percent of the floodplain per development may be filled unless a flood study (by a professional engineer) certifies that the BFE will increase less than 0.1' upstream.

(b) In all areas of special flood hazard where base flood elevation data has been provided, as set forth in section 14-426 or section 14-452(10), the following provisions are required:

(1) *Residential construction* . New construction or substantial improvement of any residential structure shall have the reference level (lowest floor, including basement), elevated no lower than the regulatory flood protection elevation (two feet above the base flood elevation.) Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided.

(2) *Nonresidential construction* . New construction or substantial improvement of any commercial, industrial, or nonresidential structure shall have the reference level (lowest floor, including basement), elevated no lower than the regulatory flood protection level (two feet above the level of base flood elevation). Structures located in A zones may be floodproofed in lieu of elevation provided that all areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in subsection 14-455(5).

(3) *Manufactured homes*. Manufactured homes shall meet the following standards:

- a. Manufactured homes that are placed or substantially improved on sites outside a manufactured home park or subdivision, in a new or expansion to an existing manufactured home park or subdivision, in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood, must be elevated no lower than one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
- b. Manufactured homes that are to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the provisions of subsection (b)(5) must be elevated so that the lowest floor of the manufactured home is elevated no lower than two feet above the base flood elevation, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
- c. Manufactured homes shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement in accordance with the regulations for mobile homes and modular housing adopted by the state department of insurance pursuant to G.S. 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis at least 36 inches or less above the grade at the sight, the chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength. When the elevation of the chassis is above 36 inches in height, certification by a registered professional engineer is required.
- d. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or damaged manufactured home parks or subdivisions located within floodprone areas. This plan shall be filed with and approved by the administrator and the local emergency management coordinator.



(4) *Recreation vehicles.* A recreational vehicle placed on a site shall either:

- a. Be on a site for fewer than 180 consecutive days;
- b. Be fully licensed and ready for highway use; or
- c. Meet the requirements of this article.

(5) *Elevated buildings.* New construction or substantial improvements of elevated buildings that include fully enclosed areas that are usable solely for the parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to preclude finished living space and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

a. Designs for complying with this requirement must either be certified by a registered professional engineer or architect or meet the following minimum criteria:

1. Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
2. The bottom of all openings shall be no higher than one foot above grade; and
3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.

b. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator).

c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.

(6) *Temporary structures.* Prior to the issuance of a development permit for a temporary structure, the following requirements must be met:

a. All applicants must submit to the administrator prior to the issuance of the development permit a plan for the removal of such temporary structure in the event of a hurricane or flash flood warning notification. The plan must include the following information:

1. A specific time period for which the temporary use will be permitted;
2. The name, address and phone number of the individual responsible for the removal of the temporary structure;
3. The time frame prior to the event at which a structure will be removed (i.e., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);

4. A copy of the contract or other suitable instrument with a trucking company to ensure the availability of removal equipment when needed; and
  5. Designation, accompanied by documentation, of a location outside the floodplain to which the temporary structure will be moved.
- b. The information given in subsection (b)(6)a. shall be submitted in writing to the administrator for review and written approval.

(7) *Accessory structure.* When accessory structures (sheds, detached garages, etc.) are to be placed in the floodplain the following criteria shall be met:

- a. Accessory structures shall not be used for human habitation (including work, sleeping, living, cooking or restroom areas);
- b. Accessory structures shall not be temperature-controlled;
- c. Accessory structures shall be designed to have low flood damage potential;
- d. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
- e. Accessory structures shall be firmly anchored in accordance with the provisions of subsection (a)(1);
- f. Service facilities such as electrical and heating equipment shall be elevated in accordance with the provisions of subsection (a)(4); and
- g. Openings to relieve hydrostatic pressure during a flood shall be provided below the base flood elevation in conformance with the provisions of subsection (b)(5).
- h. An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with section 14-455.

(8) *Floodways and nonencroachment areas.* Located within the areas of special flood hazard established in section 14-426 are areas designated as floodways and nonencroachment areas. The floodways and nonencroachment areas are extremely hazardous area due to the velocity of floodwaters which carry debris and potential projectiles and have erosion potential. The following provisions shall apply, in addition to standards outlined in section 14-481, within such floodway and nonencroachment areas:

- a. No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless it has been demonstrated through practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be prepared by a registered professional engineer and presented to the administrator.
- b. If subsection (b)(6)a. is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this division.
- c. No manufactured homes shall be permitted, except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring and the elevation standards of subsection (b)(3) are met.

(9) *Nondevelopment areas.* There shall be no development allowed within the areas of special flood hazard inside the environmentally sensitive area (ESA), as defined in section 14-103. Development for the purposes of the special flood hazard inside the ESA shall be defined as residential and nonresidential structures, including improvements or additions to such structures. However, specifically allowed improvements include public utility structures, buried utilities, roadways and accessways, and recreation facilities as long as no structures are involved.

*(Ord. of 7-10-2000, §§ 10.7.1, 10.7.2; Ord. of 11-7-2005)*



**Chapter Outline:****B.0 Overview****B.0 Overview**

This section provides guidelines to both public and private entities for the future development of the Mountains To Sea Trail in Johnston County, North Carolina. The guidelines noted herein are based on the best practices in use throughout the United States, as well as accepted national standards for greenway facilities.

**B.1 ADA Requirements****B.2 Trail Signage System****B.3 Facility Guidelines**

The guidelines should be used with the understanding that each greenway segment described in this plan is unique and that design adjustments will be necessary in certain situations in order to achieve the best results. Each segment should be evaluated on a case-by-case basis, in consultation with local or state bicycle and pedestrian coordinators, a qualified engineer and a landscape architect.

Facility design is a broad topic that covers many issues. This section provides guidelines for typical greenway facilities and is not a substitute for more thorough design and engineering work. For more in-depth information and design development standards, the following publications should be consulted:

*Greenways: A Guide to Planning, Design and Development*

Published by Island Press, 1993

Authors: Charles A. Flink and Robert Searns

*Trails for the Twenty-First Century*

Published by Island Press, 2nd ed. 2001.

Authors: Charles A. Flink, Robert Searns, Kristine Olka

*Guide to the Development of Bicycle Facilities*

Updated in 1999 by the American Association of State Highway Transportation Officials (AASHTO).

*Manual on Uniform Traffic Control Devices (MUTCD)*

Updated in 2000. Published by the U. S. Department of Transportation, Washington, DC



Mountain Bike Trails: Techniques for Design, Construction and Maintenance  
Published by Bike-Centennial, Missoula, MT

Construction and Maintenance of Horse Trails  
Published by Arkansas State Parks

Universal Access to Outdoor Recreation: A Design Guide  
Published by PLAE, Inc., Berkeley, CA, 1993

In all cases, the recommended guidelines in this report meet or exceed national standards. Should these national standards be revised in the future and result in discrepancies with this chapter, the national standards should prevail for all design decisions.

### **B.1 ADA Requirements**

The Americans with Disabilities Act requires that portions of the Mountains-To-Sea Trail be accessible to persons with varying motor skills and abilities. Perhaps the best way to comprehend the importance of ADA is to understand that most of us, at some time in our life, will experience a temporary disability which will affect the way in which we make use of outdoor resources. The best examples include relying on crutches due to a broken leg; limited ambulatory movement due to a sprained muscle; or carrying two sacks of groceries from the car to the front door and not being able to see the ground or stairs below your feet. ADA benefits all Americans by making the outdoor environment more accessible.

For the Mountains-To-Sea Trail and spur trails, the consultant and client need to focus on several important issues related to ADA. One of these involves the “path of travel”, which essentially means that from the point where an individual parks an automobile, the path of travel from the auto to the desired public resource and the length of trail throughout that resource all need to be clearly defined and free of barriers. For persons confined to a wheelchair, this means that parking spaces should be located in an area that provides optimal access to the greenway trail and complementary facilities. The consultant is proposing a 10-foot-wide asphalt or concrete paved primary trail which is wide enough to accommodate a variety of users, including persons who depend on wheelchairs for mobility. The consultant does not foresee circumstances at this time that would require special design solutions along the trail, or within designated trailheads, to accommodate users with special physical challenges.

### **B.2 Trail Signage System**

A comprehensive system of signage is required throughout the project to ensure that information is provided to trail users regarding the safe and appropriate use of all facilities. Signage includes post- or pole-mounted signs and pavement striping.

Signage is further divided into information signs, directional signs, regulatory signs and warning signs. Trail signage should be developed to conform to the (2001) Manual on Uniform Traffic Control Devices and the American Association of State Highway Transportation Official Guide for the Development of Bicycle Facilities. The needs of cyclists will require special attention, since this project is designed to accommodate bicycle traffic. The graphics on page thirty-seven illustrate examples of signage system proposed for installation along the Mountains-To-Sea Trail.

The consultant recommends the use of recycled waste materials and products in the construction of all signage for the project. Greenways Incorporated has already constructed one greenway project using all recycled waste materials which offer design versatility, often have a long life span, and require less long-term maintenance than similar products constructed from natural materials. Recycled plastic lumber and or concrete can be used for the construction of posts and poles, and recycled aluminum can be used for signs.



*Canoeing and kayaking along the Neuse River*

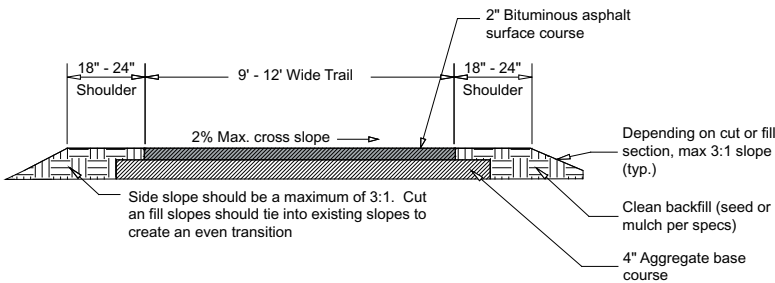
### **B.3 Facility Guidelines**

(Continue on Pages B-4 to B-12 )

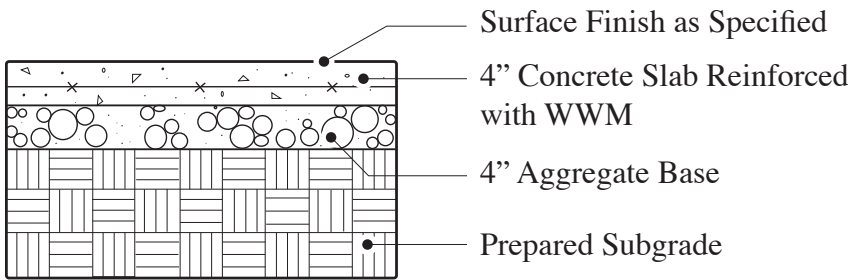
Trail Surface Materials

Cross Section

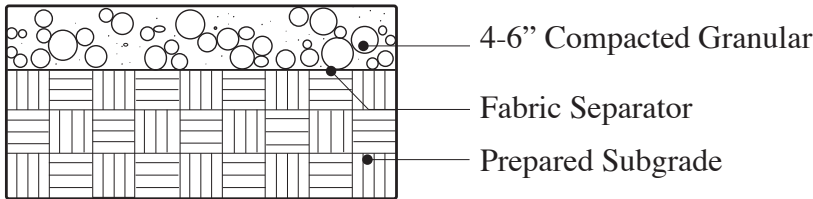
Asphalt



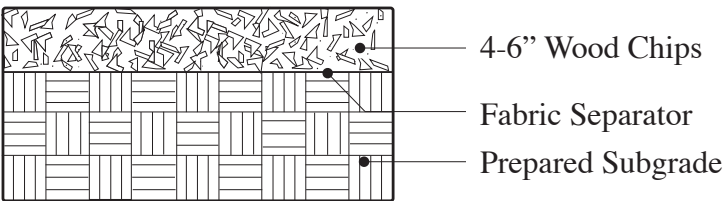
Concrete



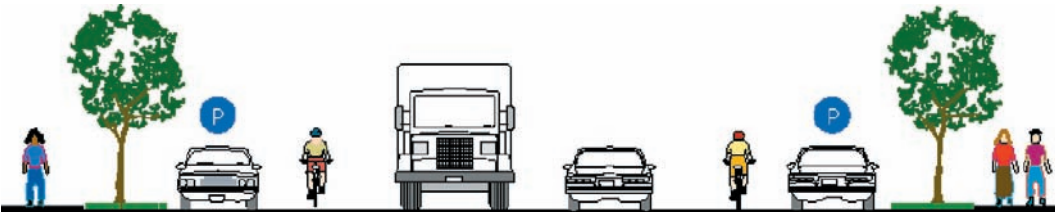


Granular Stone



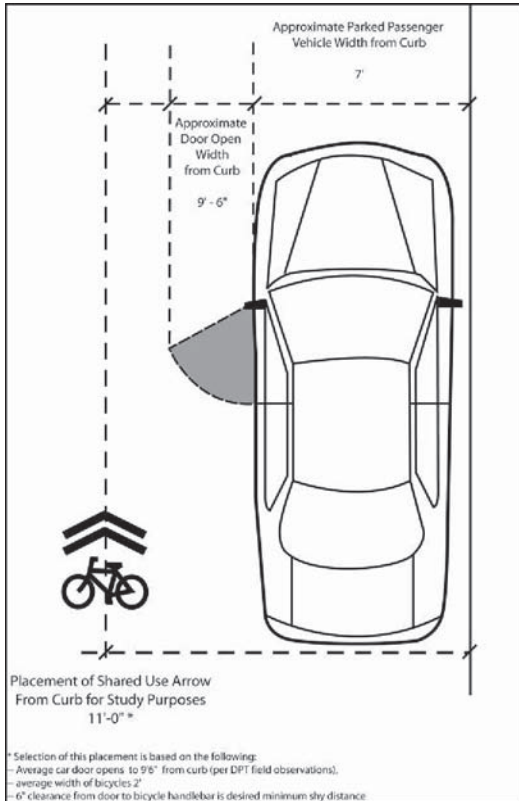
Wood Chip



Description	Recommendations
<p>Asphalt is a blackish composition of bitumens used for a variety of paving situations.</p>	<ol style="list-style-type: none"> <li>1. A 2 inch thick asphalt surface is appropriate for off-road trail use.</li> <li>2. As with any construction project, soils should be tested by qualified individual to determine thickness of the aggregate base</li> <li>3. Asphalt should be used only in areas of anticipated high use that do not contain environmentally sensitive features.</li> </ol>
<p>Concrete is a hard, solid material formed by mixing cement, water, and a conglomerate material such as gravel, sand, slag, or stone. Most often used in urban trail situations.</p>	<ol style="list-style-type: none"> <li>1. A 4 inch thick concrete surface is appropriate for off-road trail use.</li> <li>2. The accompanying illustration details a higher use situation.</li> <li>3. There are low impact instances when the concrete does not need steel reinforcement nor an aggregate base. These situations include an area where vehicles are never allowed, or areas where the subgrade is prepared in such a way that an aggregate base is not needed. Consult a soil specialist to help with the latter determination.</li> </ol>
<p>Granular consists of crushed stones and stone dust compacted into a firm surface</p>	<ol style="list-style-type: none"> <li>1. A 4-6 inch thick granular surface is appropriate for off-road trail use.</li> <li>2. Mixing stone dust with the stone is preferred because the stone dust acts as a binding agent.</li> <li>3. This soft but firm surface can accommodate multiple uses including walking, biking, jogging, and wheelchair use.</li> <li>4. Granular stone is compatible with natural environments.</li> <li>5. It should be noted that stone color can vary from quarry to quarry.</li> </ol>
<p>Wood chips when used as paving material create a soft, spongy surface.</p>	<ol style="list-style-type: none"> <li>1. A 4-6 inch thick wood chip surface is appropriate for off-road trail use.</li> <li>2. This material provides an esthetic and soft surface for walking, hiking, and jogging.</li> <li>3. Wood chips does not accommodate wheelchair or bicycle use.</li> <li>4. Constant maintenance is required to maintain trail width.</li> <li>5. This surface decomposes quite easily.</li> </ol>

On-Road Facilities	Description										
 <table><tr><td>6'+</td><td>4'-6'</td><td>7'-8'</td><td>6'</td><td>10'-12'</td><td>10'-12'</td><td>6'</td><td>7'-8'</td><td>4'-6'</td><td>6'+</td></tr></table>	6'+	4'-6'	7'-8'	6'	10'-12'	10'-12'	6'	7'-8'	4'-6'	6'+	Bicycle Lane with On-Street Parking on Moderate Volume Roadway
6'+	4'-6'	7'-8'	6'	10'-12'	10'-12'	6'	7'-8'	4'-6'	6'+		
 <table><tr><td>6'+</td><td>4'-6'</td><td>14'</td><td>10'-12'</td><td>10'-12'</td><td>14'</td><td>4'-6'</td><td>6'+</td></tr></table>	6'+	4'-6'	14'	10'-12'	10'-12'	14'	4'-6'	6'+	Wide Outside Lane on Moderate Volume Roadway		
6'+	4'-6'	14'	10'-12'	10'-12'	14'	4'-6'	6'+				
 <table><tr><td>6'-12'</td><td>4'-6'</td><td>12'</td><td>12'</td><td>4'-6'</td><td>6'-12'</td></tr></table>	6'-12'	4'-6'	12'	12'	4'-6'	6'-12'	Shared Roadway on Low Volume, Low Speed Roadway				
6'-12'	4'-6'	12'	12'	4'-6'	6'-12'						





*San Francisco Sharrow Dimensions*

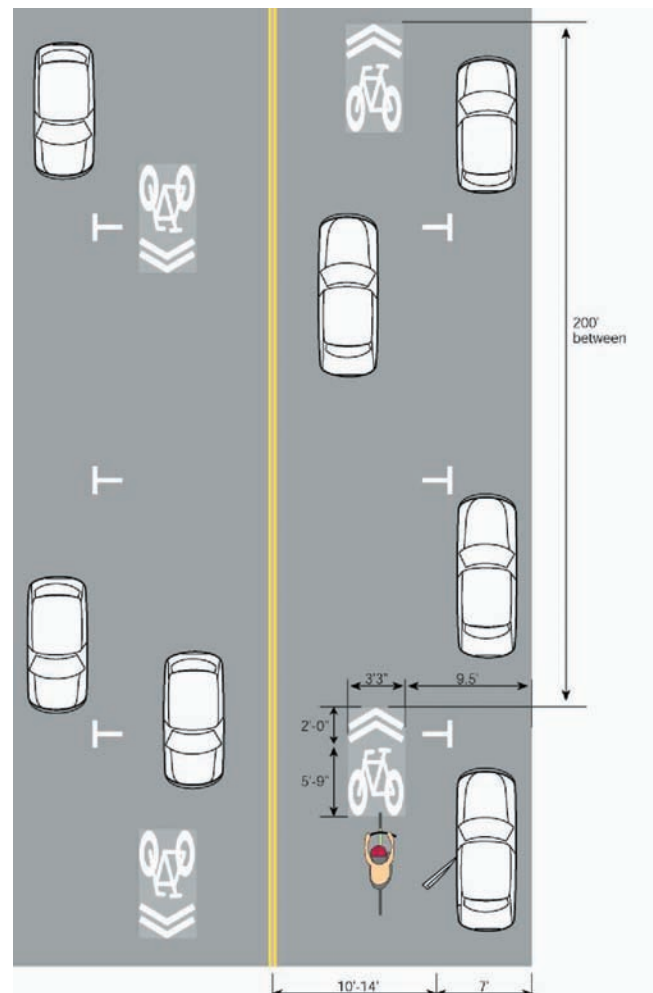


*Sharrow installed on Market Street, San Francisco*

## Bicycle Route “Sharrow” Stencil

Some U.S. cities have created a bicycle shared lane arrow (or “sharrow” stencil for use on designated on-road bicycle facilities where lanes are too narrow for striping designated bike lanes. The stencil can serve a number of purposes, such as making motorists aware of bicycles potentially traveling in their lane, showing bicyclists the appropriate direction of travel, and, with proper placement, reminding bicyclists to bike further from parked cars to prevent “dooring” collisions. Traditionally “sharrow” markings are used on roadways with on-street parallel parking. See figure below for placement guidelines.

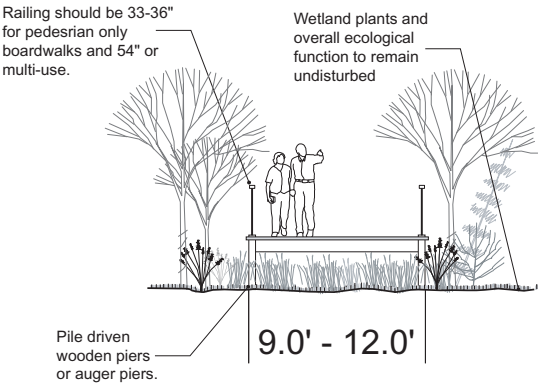
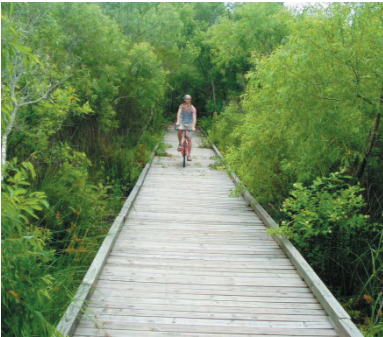
Denver and San Francisco have effectively used this treatment for several years. Other cities, such as Portland, Los Angeles, Gainesville, Cambridge, Oakland, Paris, Brisbane, Zurich, and Buenos Aires have begun to utilize this new treatment as well. The “sharrow” treatment is currently being considered for inclusion in the MUTCD, however local municipalities are encouraged to establish pilot programs on locally owned/maintained roadways.



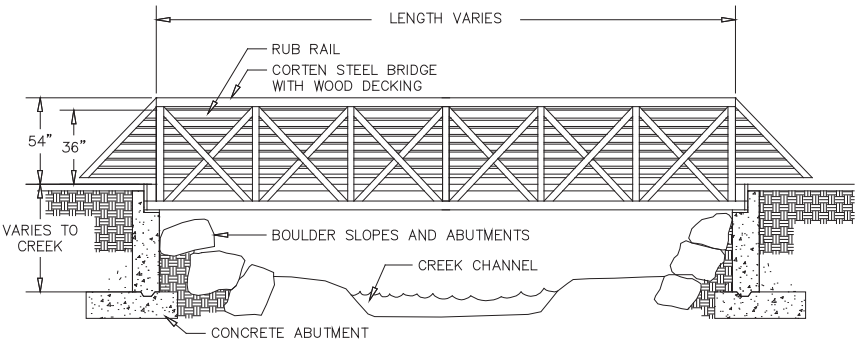
Trail Amenities

Cross Section

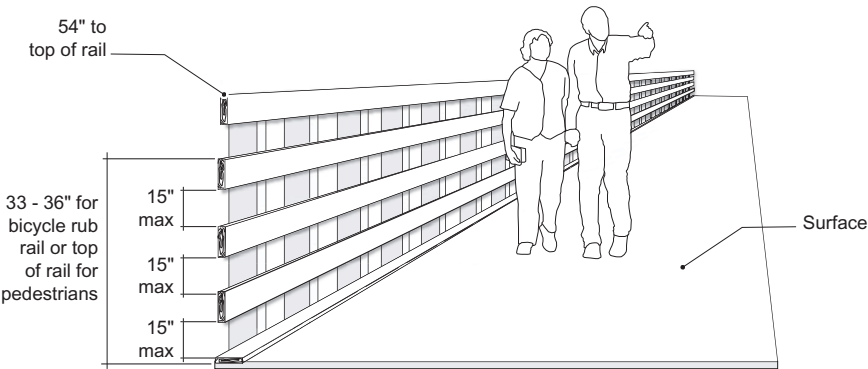
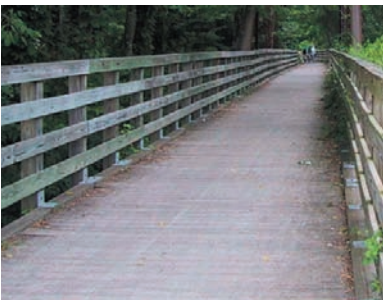
Boardwalk



Bicycle/Pedestrian Bridge




Railings


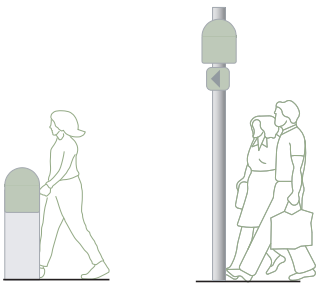




Description	Recommendations
<p>Boardwalks are essentially wooden decks placed in environmentally sensitive areas where they function as “mini-bridges”</p>	<ol style="list-style-type: none"> <li>1. When the height of a boardwalk exceeds 30”, railings are required</li> <li>2. The thickness of the decking should be a minimum of 2”</li> <li>3. Decking should be either non-toxic treated wood or recycled plastic.</li> <li>3. The foundation normally consists of wooden posts or auger piers (screw anchors). Screw anchors provide greater support and last much longer.</li> <li>4. Opportunities exist to build seating and signage into boardwalks.</li> <li>5. In general, building in wetlands should be avoided.</li> <li>6. For purposes of the MST in Johnston County, the trail should be routed so as to avoid the use of boardwalk whenever possible.</li> </ol>
<p>The function of a bridge in an off-road, multi-use trail situation is to provided access to the user over certain natural (i.e. streams) or man-made (i.e. roadways) features.</p>	<ol style="list-style-type: none"> <li>1. If a corridor already contains a bridge such as an abandoned rail bridge, an engineer should be consulted to assess the structural integrity before deciding to remove or reuse the bridge.</li> <li>2. As a general rule, a multi-use trail bridge should support 6.25 tons.</li> <li>3. Information about the load bearing capacity of bridges can be found in the American Association of State Highways and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges.</li> <li>4. There are many options in terms of high quality, prefabricated pedestrian bridges available.</li> </ol>
<p>Railings are important safety features on bridges, some boardwalks or in any areas where there may be a hazardous drop-off.</p>	<ol style="list-style-type: none"> <li>1. At a minimum, railings should consist of a vertical top, bottom, and middle rail. Picket style fencing should be avoided as it may present a safety hazard for bicyclists.</li> <li>2. A pedestrian railing should be 42” above the surface.</li> <li>3. A bicyclist railing should be 54” above the surface.</li> <li>4. The middle railing functions as a “rub rail for bicyclists and should be located between 33 and 36” above the surface.</li> <li>5. Local, state, and/or federal regulations and building codes should be consulted to determine when it is appropriate to install a railing.</li> </ol>

Trail Amenities	Description	Recommendations
<p data-bbox="233 317 342 348">Benches</p> 	<p data-bbox="570 428 1000 678">There are a wide variety of benches to choose from in terms of style and materials. The illustrated bench is a custom design that reflects the industrial feel of the warehouse district it is found in. Material selection should be based on the desired design theme as well as cost.</p>	<p data-bbox="1096 407 1526 594">Due to a wide range of users, all benches should have a back rest. A bench should normally be 16 - 20" above ground with sturdy handrails on either side. The seating depth should be 18-20" and the length should vary between 60 - 90".</p>
<p data-bbox="199 863 375 894">Other Seating</p> 	<p data-bbox="570 1024 1000 1148">Othermoreinformalseatingopportunities may exist along a trail or near a parking area where other furniture like a picnic table may be appropriate.</p>	<p data-bbox="1096 1033 1526 1123">This type of furniture can be triangulated with cooking facilities, and a trash receptacle.</p>
<p data-bbox="233 1381 342 1413">Lighting</p>  <p data-bbox="282 1696 407 1728">Pole Lighting</p> <p data-bbox="240 1787 386 1818">Bollard Lighting</p>	<p data-bbox="570 1518 1000 1799">There are two basic types of suggested lighting illustrated: Pole lighting and Bollard lighting. Pole lighting is typically employed in high use areas such as an esplanade or where a trail meets a parking lot or other urbanized area. The bollards can be used to guide individuals along a trail to a specific location.</p>	<p data-bbox="1096 1499 1526 1749">In general lighting is not appropriate for off-road trails where there is little or no development. A licensed and qualified lighting expert should be consulted before making any lighting design decisions. Doing so should reduce up-front fixed costs as well as long-term energy costs.</p>

Trail Amenities	Description	Recommendations
<p>Trash Receptacles</p> 	<p>Trash receptacles should be constructed of a suitable material to withstand the harsh elements of the outdoor environment. Additionally trash receptacles should ensure that litter is contained securely preventing contamination or spillage into the surrounding environment.</p>	<p>Trash receptacles should be placed along the trail and at all trailheads. Adequate trash receptacles will combat littering and preserve the natural environment for all trail users.</p>
<p>Bicycle Racks</p> 	<p>There are many types of bike racks available however the two recommended methods are to secure a bike in an enclosed storage, or to lock it to a rack as illustrated here.</p>	<p>A bike rack is recommended as the most inexpensive way to secure a bicycle. An enclosed structure with rented keys is appropriate only in very high bicycle use situations. As illustrated, bike racks can be designed to reinforce a particular design theme.</p>
<p>Vegetation Buffer</p> 	<p>A buffer vegetated buffer is used to separate the trail not only for floodplain protection and noise from the road, but also to screen the trail from nearby homes.</p>	<p>Buffer areas should be planted according to the plant community appropriate for the respective environment.</p>



Trail Signage	Description	Recommendations
<p>Trail Identity Logo</p> 	<p>The MST logo should be used to aid in reinforcing the trail's identity. Additionally local trail logos should compliment MST signage within the MST corridor. Signage should be simple, direct, and easy to identify.</p>	<p>A skilled graphic designer should be consulted when generating the design for local trail logos. Logos should be used as a consistent element throughout the length of the trail.</p>
<p>Directional Signage</p> 	<p>The MST logo can be attached to various street furniture to mark a roadside trail or to direct motorists and pedestrians to a formal trailhead. The MST Logo should be attached to a variety of pedestrian level signage throughout the trail.</p>	<p>The basic signage should consist of the MST logo and a directional arrow. Additional site specific information may be included such as distance to trailhead and/or specific trail name. To be viewed by a vehicle, the bottom of the sign should be mounted no lower than 10' above the ground. At the minimum, however, it can be mounted to a tree to mark the trail.</p>
<p>Educational Signage</p> 	<p>This is a large educational or interpretive signage that is placed at the trailhead. These should include easy to read and comprehend information about the trail.</p>	<p>As part of the trailhead, the overall design of this signage is the first experience most visitors will have with the trail. The design and information this sign communicates, will establish the trail identity and help to create a more unified, pleasurable experience.</p>
<p>Trail Bollards</p> 	<p>Trail bollards are distance markers placed at set intervals. These let folks know where they are on the trail as well as provide important information to those who may be vigorously tracking their exercising.</p>	<p>Typically these are constructed of either weather treated or stained wood although other materials may be selected. The MST logo may be included on these bollards as shown.</p>



### *Chapter Outline:*

#### *C.0 Overview*

#### *C.1 Funding Sources*

#### *C.2 Funding Table*

## **C.0 Overview**

Implementing the recommendations of this plan will require a combination of funding sources that include local, state, federal, and private money. This Appendix provides a listing of the most commonly used funds for greenway, bicycle and pedestrian projects in North Carolina. Fortunately, the benefits of protected greenways and alternative transportation are many and varied. Also, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 (SAFETEA) funds a large number of federal sources listed in the Funding Table to protect the environment. This allows programs in Johnston County to access money earmarked for a variety of purposes including water quality, hazard mitigation, recreation, air quality, alternate transportation, wildlife protection, community health, and economic development. Competition is almost always stiff for state and federal funds, so it becomes imperative that local governments work together to create multi-jurisdictional partnerships and to develop their own local sources of funding. These sources can then be used to leverage outside assistance. The long term success of this plan will almost certainly depend on the dedication of a local revenue stream for bicycle and greenway projects.

It is important that Johnston County fully evaluate its available options and develop a funding strategy that can meet community needs, maximize local resources, and leverage outside funding. Financing will be needed to administer the continued planning and implementation process, acquire parcels or easements, and manage and maintain facilities.

Creative planning and consistent monitoring of funding options will likely turn up new opportunities not listed here.

The Funding Table included in this Appendix provides a synopsis of different Federal, State and Local funding sources available for implementing greenway, bicycle and pedestrian projects. To be eligible and successful in getting these funds, municipalities in Johnston County will generally need to provide a local match in many cases.

In pursuing these funding sources, Johnston County should follow the ‘rolling thunder’ strategy as opposed to ‘big bang’ so that the City/County can implement the low-cost projects first to show local commitment and to build the momentum from the ground up. In addition, Johnston County would need to set project priority based on five basic principles:

1. Piggyback with roadway, transit and pedestrian projects
2. Encourage work, non-work and school bicycle travel
3. Focus on Urban Core Areas
4. Provide geographic coverage and connectivity
5. Seek modal balance of investments

### **C.1 Funding Sources**

A number of programs, agencies, websites, and resources provide access to funding and project development opportunities. These opportunities should be utilized in addition to the funding sources outlined in the Funding Table. These include:

North Carolina Division of Bicycle and Pedestrian Transportation  
<http://www.ncdot.org/transit/bicycle/>

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Safe Routes to School  
<http://www.saferoutesinfo.org/>

National Center for Bicycling and Walking  
<http://www.bikewalk.org/>

Pedestrian and Bicycle Information Center  
<http://www.bicyclinginfo.org/>

### **C.2 Funding Table**

The Funding Table continues on the following four pages.





### *Chapter Outline:*

#### *C.0 Overview*

#### *C.1 Funding Sources*

#### *C.2 Funding Table*

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### **C.2 Funding Table**

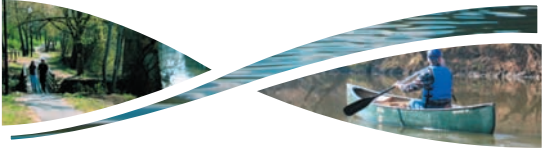
The Funding Table continues on the following four pages.



Funding Program	Source	Primary Purpose	Eligibility	Availability
National Highway System (NHS)	Federal	Improvements to roads that are part of the NHS and NHS Intermodal connectors	Construction of pedestrian and bicycle facilities on land adjacent to any highway on the NHS	Variable; Projects which parallel interstates or highways have the best potential
Surface Transportation Program (STP)	Federal	Construction resurfacing, and operational improvements for highways and bridges, including transit and other modes	Construction of pedestrian and bicycle transportation facilities; Non-construction projects for safe bicycle use; Upgrade public sidewalks to comply with the ADA. Projects do not have to be within the right-of-way of a Federal-aid highway	Variable; Good source for bicycle and pedestrian projects when combined with roadway projects
Surface Transportation Program Enhancements Set-aside, (STP-E) or Transportation Enhancement Activities (TEAs)	Federal	Funds twelve specific activities that include pedestrian and bicycle facility development, and safety/education activities	3 of the 12 categories are pedestrian and bicycle facilities, safety and education for pedestrians and bicyclists, and rail-trails. Primary source for independent bicycle projects in NC.	\$4 million per year for independent bicycle projects set-aside for the NCDOT region that includes Johnston County
Office of Bicycle and Pedestrian Transportation	Federal	State may spend a portion of its federally allocated STP funds on bicycle and pedestrian facilities	Construction of pedestrian and bicycle facilities, including Rails-to-Trails projects and non-construction projects such as brochures, public service announcements, and route maps	Variable; Projects must be part of a long-range transportation plan
Environmental Protection Agency (EPA)	Federal	Funds used to improve air quality and reduce transportation-related emissions	Construction of bicycle facilities and greenways to reduce automobile use and promote bicycle use	Variable; funding provided through EPA's Office of Transportation and Air Quality (OTAQ)
Congestion Mitigation and Air Quality (CMAQ)	Federal	Funds projects in nonattainment and maintenance areas that reduce transportation related emissions	Construction of pedestrian and bicycle facilities; Non-construction projects for safe bicycle use. Projects do not have to be within the right-of-way of a Federal-aid highway, but must demonstrate an air quality benefit.	Annual variable program; Bicycle projects along Johnston County commuter routes have the best potential to receive CMAQ funding
Highway Safety Improvement Program (HISP)	Federal	Reduction in traffic fatalities and serious injuries on public roads.	Improvements for pedestrian/bicyclist safety; Construction of yellow-green signs at pedestrian/bicycle crossings and in school zones. Correction of hazardous locations including roadside obstacles, railway-highway crossing needs, and poorly marked roads that constitute a danger to bicyclists/pedestrians. Highway safety improvement projects on bicycle/pedestrian pathways or trails.	Variable; Good funding source for urban area crash-prone bicycle and pedestrian routes

JOHNSTON COUNTY  
MOUNTAINS TO SEA TRAIL



**APPENDIX C:**  
*FUNDING  
SOURCES  
TABLE*



Funding Program	Source	Primary Purpose	Eligibility	Availability
Safe Routes to School (SRTS)	Federal	Enable and encourage children, including those with disabilities, to walk and bicycle to school; Make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; Facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools	Sidewalk improvements; Traffic calming and speed reduction improvements; Pedestrian and bicycle crossing improvements; On-street bicycle facilities; Off-street bicycle and pedestrian facilities Secure bicycle parking facilities; Traffic diversion improvements in the vicinity of schools; Public awareness campaigns and outreach; Traffic education and enforcement in the vicinity of schools; Student sessions on bicycle and pedestrian safety, health, and environment; Funding for training, volunteers, and managers of safe routes to school programs	New program authorized in August of 2005 under the new transportation act titled SAFETEA-LU (2005-2009); Johnston County would need to coordinate with NCDOT for available funding through 2009
Recreational Trails Program (RTP)	Federal	Develop and maintain recreational trails and trail-related facilities for nonmotorized/ motorized recreational trail uses	Nonmotorized or mixed use (motorized and nonmotorized) trails. Eligible categories are trail maintenance and rehabilitation, trailside or trailhead facilities, construction and maintenance equipment, trail construction, trail assessments, and trail safety and environmental protection education.	Variable; MST and other planned trails in Johnston County have the best potential
Land and Water Conservation Fund (LWCF)	Federal	Build a variety of park and recreation facilities, including trails and greenways.	Greenway and trail facilities	Variable; in North Carolina, allocated through DENR - State Division of Parks and Recreation; funding zeroed out for 2006-2007
Wetlands Reserve Program	Federal	Providing technical and financial assistance to landowners who want to restore and protect wetland and riparian areas and place sensitive areas under permanent easement	Open space and greenways in riparian buffers	Variable; a voluntary program available to landowners and administered through USDA's Natural Resource Conservation Service
National Endowment for the Arts	Federal	Funds arts-related programs through the Design Arts Program Assistance and provides links to other federal departments/agencies that offer funding opportunities for arts and cultural programs.	Can support development of ancillary greenway and bicycle facilities that incorporate and celebrate community culture, art, and history.	Variable
Highway Bridge Replacement and Rehabilitation (HBRRP)	Federal	Replace and rehabilitate deficient highway bridges and to seismically retrofit bridges	Pedestrian/bicycle facilities on highway bridges. If a highway bridge deck is replaced or rehabilitated, and bicycles are permitted at each end, then the bridge project must include safe bicycle accommodations	Variable

JOHNSTON COUNTY  
MOUNTAINS TO SEA TRAIL

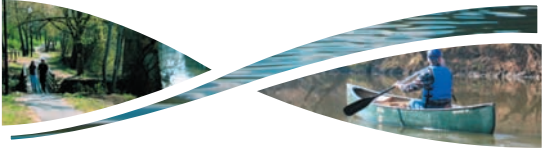
APPENDIX C:  
FUNDING  
SOURCES  
TABLE



Funding Program	Source	Primary Purpose	Eligibility	Availability
Job Access and Reverse Commute Grants	Federal	Intended to transport welfare recipients and eligible low-income individuals to and from employment	Can fund pedestrian and bicycle-related services	Variable
Urbanized Area Formula Grants (Section 5307)	Federal	Transit capital and planning assistance to urbanized areas with populations over 50,000 and operating assistance to areas with populations of 50,000 - 200,000	Improve bicycle and pedestrian access to transit facilities and vehicles, including bike stations	Variable
Urbanized Area Formula Grants Transportation Enhancements Set-aside	Federal	1% set-aside of section 5307 funds for areas with population over 200,000 for 9 specific Transit Enhancement Activities	Pedestrian and bicycle access, bicycle storage facilities, and installing equipment to transport bicycles on buses	Variable
Community Development Block Grant (CDBG)	Federal	Directly provides funds to cities and towns for projects with community-wide benefits. Activities must benefit low to moderate income persons.	Greenways, trails, and bicycle facilities that provide increased safety, access, and transportation options	Variable,through US Department of Housing and Urban Development (HUD)
NC Department of Transportation, Division of Bicycle and Pedestrian Transportation (DBPT)	State	Single largest funding source for bicycle, pedestrian, and greenway projects; offers several programs including training, mapping, and sponsoring conferences in support of bicycle and pedestrian facility development	Construction of greenway and bicycle facilities	Variable
Transportation Improvement Program (TIP)	State	Improvements for bicycling and walking within a four year schedule of projects	Construction or improvement of greenway and bicycle facilities; Can be incidental (part of a highway or bridge project) or independent (bicycle or greenway project as standalone)	Variable; Determined by statewide MPO requests and priorities
Scenic Byways	State	Improvements to roadways selected as State scenic byways	Construction of bicycle facilities and sidepaths; Signage; Currently 45 routes in North Carolina	Variable, through STIP program; no direct set aside for regions of State
State Bicycle and Pedestrian Planning Grant Initiative	State	Provides communities with planning grants in support of the completion of community-wide bicycle and pedestrian plans	Development of bicycle plans for a community	Variable; \$400,000 available for 18 municipalities in 2006
Small Cities Community Development Block Grants	State	Promote economic development; serve low to moderate-income neighborhoods	Greenways and parks that are part of a community’s economic development plan may apply	\$50 million available statewide for a variety of programs

JOHNSTON COUNTY  
MOUNTAINS TO SEA TRAIL

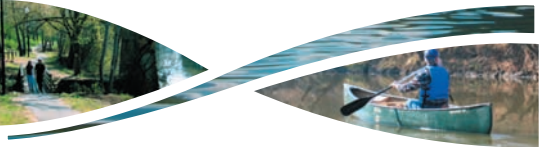
**APPENDIX C:**  
*FUNDING  
SOURCES  
TABLE*



Funding Program	Source	Primary Purpose	Eligibility	Availability
Highway Trust Fund	State	Freeway construction and rehabilitation	Limited, as the projects would need to be on interstate facilities	\$6 million historically
State Construction	State	Highway construction	May be used for bicycle projects if combined with NC highway projects	\$1 million per year set aside for regional independent bicycle projects
Governor’s Highway Safety Program (GHSP)	State	Improve safety in NC	May be used for bicycle projects if there are traffic safety benefits	Variable annual program based on requests
North Carolina Parks and Recreation Trust Fund (PARTF)	State	Funds acquisition, development, and renovation of recreational areas	Acquisition and development of greenways and trails	Variable - typically no more than \$250,000 can be requested by a local government per year
Clean Water Management Trust Fund (CWMTF)	State	Land and water protection by acquisition of buffers	Acquisition of land for greenways, environmental, educational, and recreational benefits	Variable - approximately \$30 million a year placed in CWMTF
North Carolina Division of Water Quality	State	Curbing non-point source pollution	Development of greenways as part of restoration and improvement projects	Variable, nearly \$1 million available
North Carolina Adopt-a-Trail Grant Program	State	Trail facility construction	Trail facility construction, trail maintenance, signage, trail brochures and maps	Operated by Trails Section of the NC Division of State Parks - typically grants are at \$5,000 per project
North Carolina Natural Heritages Trust Fund	State	Acquisition and protection of important natural areas	Grants awarded for purchase of land for trails; greenway facility development	Variable
North Carolina Health and Wellness Trust Fund & Blue Cross/Blue Shield - Fit Together	State	Recognizes and rewards North Carolina communities’ efforts to support physical activity and healthy eating initiatives	Efforts to support physical activity in the community, schools, and workplaces; could include improving access, information, and facilities for bicycling and walking	8 or 9 up to \$30,000 2-year grants available
North Carolina Conservation Tax Credit	State	Provides incentive for landowners to donate conservation easements; program goal is to protect water supply watersheds and wildlife corridors, and develop greenways	Greenway facility development	Variable
Discretionary/Demonstration Projects (DP)	State	Demonstration project	Eligible	\$2 million historically
Railroad Crossing (RR)	State	Improve safety	Eligible	\$5 million historically

JOHNSTON COUNTY  
MOUNTAINS TO SEA TRAIL

**APPENDIX C:**  
*FUNDING  
SOURCES  
TABLE*



Funding Program	Source	Primary Purpose	Eligibility	Availability
City (L)	Local	Local funds such as CIP, impact fees, stormwater utility fees, taxes (sales, property, excise), exactions, partnerships, loans, and bond funds from the City	Eligible	Variable annual program
City	Local	Local trail sponsors and volunteer efforts; CityRacks Bicycle Parking Funding Program; Triangle Rails-to-Trails Conservancy	Eligible	Variable
Private (O) - Health, art, conservation, etc.	Private	American Greenways Eastman Kodak Awards, National Trails Fund, The Conservation Alliance, Foundation for the Carolinas, Land for Tomorrow Campaign, North Carolina Community Foundation, Bank of America Charitable Foundation, Inc., Duke Energy Foundation, Robert Wood Johnson Foundation, Trust for Public Land, Z. Smith Reynolds Foundation, Blue Cross/Blue Shield of North Carolina, American Heart Association, Cooper Institute	Eligible	Case specific
Sources: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and NCDOT web sites				

